UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,537	09/05/2003	Karl O. Lillevold	109905-132841	8776

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STEVEN C. STEWART
REALNETWORKS, INC.
2601 ELLIOTT AVENUE, SUITE 1000
SEATTLE, WA 98121

EXAMINER
SENFI, BEHROOZ M

ART UNIT	PAPER NUMBER
2621	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-29</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-29</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>02/26/04</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Claim Objections

1.   Claims 1 – 7 and 11 - 29 are objected to because of the following:

The phrase "at least in part" as cited in independent claims 1, 11, 15 and 26; it is

unclear whether the process is a parallel decoding process or not, and/or whether the

phrase "at least in part" refers to decoding process or what. Clarification is requested.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3.   Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Regarding claim 7, it is unclear as to what applicant actually means in regards to:

"wherein the first and the second frame are one of the same frame" as claimed.

Clarification is requested.

For the purpose of art rejection, examiner will interpret the above-mentioned

limitation, as best understood by the examiner.

Claim Rejections - 35 USC § 101

4.   Claims 11 – 14 are rejected under 35 U.S.C. 101 because: the claimed invention

is directed to non-statutory subject matter as described below.

Regarding claim 11, it is noted that, the claim invention is directed to an article of

manufacture comprising; storage and plurality of programming instructions stored on the

storage, the programming instructions designed to enable an apparatus to decode a

first slice of a first frame of a video, and decode a second slice of a second frame of the

video in parallel with the decoding of the first slice of the first frame of the video, at least

in part.

Such article of manufacture as defined in specification (0058) may be diskette or

disk or DVD or CD drives. However, such article of manufacture claim does not result to

a practical application, which produces a "useful, concrete and tangible result", as

required to fall within the statutory classes set forth in 35 USC 101, the Interim

Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility

(Official Gazette Notice of 22 November 2005).

Since claims 12 - 14 depend from independent claim 11, claims 11 - 14 as a

whole do not fall within the statutory classes under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1 - 10, 15 - 20 and 26 – 29 are rejected under 35 U.S.C. 102(e) as being

anticipated by MacInnis (US 2003/0189982).

Regarding claims 8 and 26 - 27, MacInnis '982 discloses, retrieving a slice of a

Frame of a video (i.e. page 3, paragraph 0035), determining whether the slice has any

decoding dependency on having one or more other slices decoded first (i.e. fig. 3,

abstract, page 1, paragraph 0005) and further determining whether the one or more

other slices on which decoding of the slice depends have been decoded, if the slice is

determined to be dependent on having one or more other slices decoded first, (i.e.

abstract) and temporarily suspending decoding the slice if the slice is determined to be

dependent on having one or more other slices decoded first and at least one of the one

or more other slices has not been decoded (i.e. fig. 3, abstract, page 1, paragraphs

0011 – 0012), and the additional limitation a video provider to provide an encoded video

(claim 26, fig. 1, compressed video data input).

Regarding claims 1 – 5, the limitations, in claim1, decoding a first slice of a first

frame of a video; and decoding a second slice of a second frame of the video in

parallel with the decoding of the first slice of the first frame of the video, at least in part,

and in claim 2; wherein the decoding of the first slice comprises determining whether

the first slice has any decoding dependency on having one or more other slices

decoded first, and in claim 3; wherein the decoding of the first slice further comprises

determining whether the one or more other slices on which decoding of the first slice

depends have been decoded, if the first slice is determined to be dependent on having

one or more other slices decoded first and in claims 4 – 5, wherein the decoding of the

first slice further comprises temporarily suspending decoding the first slice if the first

slice is determined to be dependent on having one or more other slices decoded first,

and at least one of the one or more other slices has not been decoded and wherein the

decoding of the first slice further comprises decoding the first slice when all of the one or more other slices on which decoding of the first slice depends have been decoded, have been discussed earlier with respect to claim 8 above and reads on MacInnis (i.e. fig. 3, abstract, page 1, paragraphs 0005 and 0011 – 0012 and page 3, paragraph 0035).

Regarding claims 6, 20 and 29, MacInnis '982 discloses, wherein the decoding of the first slice further comprises, decoding the first slice on determining that the first slice has no decoding dependency; as discussed earlier in the above action and as shown in (page 2, paragraphs 0028 – 0031) if there is a dependency issue, the decoding process would be delayed, otherwise; if there is no decoding dependency, the decoding process would not be delayed, and continue with decoding process of the row/slice.

Regarding claim 7, the limitations, wherein the first and the second frame are one of the same frame, reads on (i.e. page 1, paragraph 0007, last two lines).

Regarding claims 9 – 10, the limitations claimed have been addressed previously with respect to claims 5 – 6 above.

Regarding claims 17, 19 and 28, decode the first slice when all of the one or more other slices on which decoding of the slice depends have been decoded (i.e. abstract).

Regarding claim 15, the limitations claimed are substantially similar to claim 26, therefore the ground for rejecting claim 26 also applies here. Furthermore, the buffer to store frames of a video, reads on (i.e. fig. 1, memory 105).

Regarding claim 16, MacInnis '982 discloses, determining whether the slice has any decoding dependency on having one or more other slices decoded first (i.e. fig. 3, abstract, page 1, paragraph 0005).

Regarding claim 18, MacInnis '982 discloses, temporarily suspending decoding the slice if the slice is determined to be dependent on having one or more other slices decoded first and at least one of the one or more other slices has not been decoded (i.e. fig. 3, abstract, page 1, paragraphs 0011 – 0012)

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8.   Claims 11 – 14 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacInnis (US 2003/0189982).

Regarding claim 11, MacInnis '982 teaches, decode a first slice of a first frame of a video and decode a second slice of a second frame of the video in parallel with the decoding of the first slice of a second frame of the video in parallel with the decoding of the first slice of the first frame of the video at least in part (i.e. fig. 3, abstract, page 1, paragraphs 0011 – 0012).

MacInnis is silent in regards to explicitly mention, storage medium with plurality of programming instructions stored on the storage. However, MacInnis teaches Multi-row decoding process using multiple processors to carry out the process. Examiner takes

Official Notice; to note that the processor having storage to store instructions/software

to be able to execute the instruction for processing/decoding the video is notoriously

well known in the video-processing field of the prior art of the records.

In view of the above, it would have been obvious to one having ordinary skill in

the art at the time of the invention was made to implement such known teaching in the

above manner.

Regarding claims 12 - 13, MacInnis '982 teaches, determining whether the slice

has any decoding dependency on having one or more other slices decoded first (i.e. fig.

3, abstract, page 1, paragraph 0005) and further determining whether the one or more

other slices on which decoding of the slice depends have been decoded, if the slice is

determined to be dependent on having one or more other slices decoded first, (i.e.

abstract) and temporarily suspending decoding the slice if the slice is determined to be

dependent on having one or more other slices decoded first and at least one of the one

or more other slices has not been decoded (i.e. fig. 3, abstract, page 1, paragraphs

0011 – 0012).

Regarding claim 14, MacInnis '982 teaches, decode the first slice on determining

that the first slice has no decoding dependency (i.e. page 2, paragraphs 0028 – 0031) if

there is a dependency issue, the decoding process would be delayed, otherwise; if

there is no decoding dependency, the decoding process would not be delayed, and

continue with decoding process of the row/slice.

Regarding claim 24, the limitations claimed have been analyzed and rejected

with respect to claim 11 above.

9.   Claims 21 – 23 and 25 are rejected under 35 U.S.C. 103(a) as being

unpatentable over MacInnis (US 2003/0189982) in view of Wu et al. (US

2004/0057522).

Regarding claim 21, MacInnis is silent in regards to explicitly mention, ASIC.

WU in the same field (i.e. page 1, paragraph 0023) teaches, MPEG video

decoders, which are used in today's set-top boxes or DVD players, a decoding

algorithm in application specific integrated circuit (ASIC) is implemented.

In view of the above, it would have been obvious to one having ordinary skill in the art

at the time of the invention was made to use application specific integrated circuit

(ASIC) as dedicated hardware which can be programmed to perform a desired

functionality.

Regarding claims 22, 23 and 25, the limitations, circuit board and apparatus is a

selected one of a palm sized device, a wireless mobile phone, a digital personal

assistance, a set-up box, a digital versatile (WU; page 1, paragraph 0023).

Contact

10.   Any inquiry concerning this communication or earlier communications

from the examiner should be directed to **Behrooz Senfi** whose telephone

number is **(571) 272-7339.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, **Mehrdad Dastouri** can be reached on **(571) 272-7418.**

Hand-delivered responses should be brought to Randolph Building, 401 Dulany
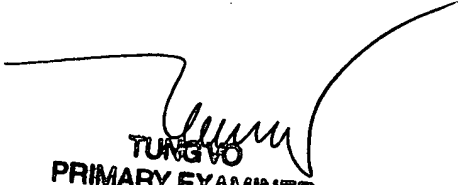
Street, Alexandria, Va. 22314.

Any inquiry of a general nature or relative to the status of the application or

proceeding should be directed to the Technology Center 2600 Customer Service Office

whose telephone number is **(571) 272-6000,**

Or faxed to:

(571) 273-8300

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

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more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

B.M.S.

TUNG VO
PRIMARY EXAMINER